

In the Specification:

Please replace the paragraph at page 2, lines 21 to 25, with a replacement paragraph amended as follows:

In fitting a plug connector into such a receptacle connector, it is not possible to verify whether the fitting is achieved up to the predetermined depth. Accordingly, when the fitting work is done blindly by extending a hand behind an object, the fitting ~~can not~~ cannot be verified visually and it is hard to prevent imperfect fitting.

Please add two new paragraphs at page 3, between lines 1 and 2 as follows:

The above objects have been achieved according to the invention in a combination of a receptacle connector and a plug connector for connecting an electric wire or flat flexible cable to a counterpart member such as a circuit board. It is easy to fit the plug completely and surely into the receptacle, even without visual verification, and latch structures of the receptacle securely hold the plug. The plug is first partially inserted into the receptacle at an oblique angle and is then tilted into the final connection plane, whereby the latch structures provided on latch arms protruding from the receptacle along the final connection plane engage and hold the plug.

The plug has a substantially rectangular shape including outwardly facing width fitting faces and

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rearwardly facing depth fitting faces, and is preferably connected to an electric wire or a flat flexible cable. The receptacle includes a body bounding a receptacle groove adapted to receive the plug therein, and a pair of latch arms that extend from the body in a depth direction along the final connection plane at two locations spaced apart in a width direction and that are elastically deflectable in the width direction. A retaining part provided on each latch arm includes a width fitting structure that faces inwardly in the width direction and is adapted to engage the plug width fitting face of the plug, and a depth fitting structure that faces forwardly or inwardly in the depth direction and is adapted to engage the plug depth fitting face of the plug. The retaining part further has a guiding part that generates a force component acting outwardly in the width direction so as to deflect the latch arm when a pressing force is applied on the guiding part by the plug as the plug is tilted from the oblique insertion angle toward the final connection plane. The plug and the receptacle include suitable electrical contacts to establish an electrical connection between the electric wire or cable and the counterpart member through the plug and the receptacle.

Please delete the five paragraphs at page 3, line 2 to page 7, line 16.

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Please replace the heading at page 9, line 6 with a replacement heading amended as follows:

Detailed Description of a Preferred Embodiment of the Invention

Please add five new paragraphs at page 27, after line 6 as follows:

The present invention was made in view of the above-mentioned points, and its objective is to provide a receptacle connector and a plug connector, wherein the receptacle connector has a greater force for holding the plug connector in the pull-out direction, verification of their fitting can be done easily and even if the fitting work is done blindly, incomplete fitting can be avoided, and these merits can be accomplished while the thicknesses of the connectors are reduced, by providing the receptacle connector with latch arms extending substantially in the pull-out direction of the plug connector and inserting the plug connector into the receptacle connector slantwise in relation to the pull-out direction of the plug connector, then laying the plug connector toward the latch arms to fit the plug connector with the latch arms.

To accomplish the above-mentioned objective, the receptacle connector with latch arms according to the present invention is to be mounted on a counterpart member and to which a plug connector that is connected to an electric wire or a flat type flexible cable is to be connected.. With reference to a depth direction, a width

direction and a thickness direction all being perpendicular to each other, the plug connector is, when seen in the thickness direction, substantially a rectangle having the depth direction and the width direction as its two sides. A contact is exposed on at least one face thereof in the thickness direction at the inward edge in the depth direction. A moving side width fitting face that faces outward in the width direction and a moving side depth fitting face that faces outward in the depth direction are provided at two locations spaced from each other in the width direction. The receptacle connector with latch arms comprises a receptacle connector body having a groove comprising two transverse walls opposed to each other in the thickness direction and a vertical wall present between the two transverse walls. The groove opens outward in the depth direction and is adapted to have the inward edge in the depth direction of the plug connector to be inserted therein. The receptacle connector body is at least partly insulating. A conductive contact is provided in an insulating part of the receptacle connector body, and comprises a contacting part being able to undergo elastic deformation in the thickness direction provided in the groove of the receptacle connector body to contact the contact of the plug connector, and a connecting part to be connected to the counterpart member. A pair of latch arms extend outward in the depth direction from two locations spaced from each other in the width direction on the receptacle connector body and are able to undergo elastic

deformation in the width direction. Each latch arm is provided with a retaining part projecting inward in the width direction. The retaining part is provided with a guiding part that generates a component force acting outward in the width direction due to a pressing force acting on the guiding part from the side opposite to the counterpart member in the thickness direction. A fixed side width fitting face that faces inward in the width direction cooperates with the moving side width fitting face of the plug connector. A fixed side depth fitting face that faces inward in the depth direction cooperates with the moving side depth fitting face of the plug connector.

When the plug connector is to be inserted into this receptacle connector, the plug connector is held slantwise in such a way that its outward edge in the depth direction is more distant than its inward edge from the receptacle connector, the inward edge is inserted into the groove of the receptacle connector, and the plug connector is laid in such a way that its outward edge comes closer to the latch arms of the receptacle connector. As a result, the bottom being one face in the thickness direction of the plug connector will press the guiding parts of the retaining parts of the latch arms, and in turn the guiding parts will generate the component force acting outward in the width direction from the pressing force of the plug connector, and the latch arms will be elastically deflected by these

forces outward in the width direction. When the plug connector is laid farther downwardly, the part outward in the depth direction of the plug connector will enter beyond the retaining parts of the latch arms into the counterpart member side and fit in a space between the two latch arms, and the plug connector will be held in its laid state by the retaining parts of the latch arms that recover themselves because of their elastic restoring forces, and the fixed side width fitting faces will make surface-to-surface contact with the moving side width fitting faces of the plug connector, and the fixed side depth fitting faces will make surface-to-surface contact with the moving side depth fitting faces of the plug connector. Thus, both connectors will be connected together mechanically. Moreover, their respective contacts will contact together, and the contact pressures between them will be assured by the elastic restoring forces due to the elastic deformation of the contacts. Thus, both connectors will be connected together electrically. To pull the plug connector out of the receptacle connector, the latch arms are elastically deflected outward in the width direction. Then the plug connector will be freed from the restraint imposed by the retaining parts, and due to the elastic-deformation-induced forces of the contacts, the outside part in the depth direction of the plug connector will go beyond the retaining parts of the latch arms in the direction of moving away from the counterpart member, and the plug connector will take a slant position

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in such a way that the outward edge in the depth direction thereof is more distant than the inward edge thereof from the receptacle connector, and in turn, the plug connector will be able to be pulled out.

In that case, as the fixed side depth fitting faces facing in the depth direction and the moving side depth fitting faces facing oppositely in the depth direction make surface-to-surface contact with each other, the plug connector has a large holding force in the pull-out direction, in other words, the direction of pulling outward in the depth direction. Moreover, if the plug connector is slanted in such a way that the outward edge in the depth direction thereof is more distant than the inward edge from the receptacle connector, the plug connector is not fitted in the receptacle connector, and if the plug connector is laid and set between the two latch arms, the plug connector is fitted in the receptacle connector. Thus the position or attitude of the plug connector indicates whether or not it is fitted into the receptacle connector. Moreover, when the latch arms restore themselves due to their elastic restoring forces and the fixed side width fitting faces make surface-to-surface contact with the moving side width fitting faces of the plug connector and the fixed side depth fitting faces make surface-to-surface contact with the moving side depth fitting faces of the plug connector, a sense of clicking will be obtained. Hence it is easy to

verify the fitting condition, and even if the fitting work is done blindly, defective fitting will not result.

As the receptacle connector of the present invention is provided with latch arms extending substantially in the pull-out direction of the plug connector, and the plug connector is inserted into the receptacle connector slantwise in relation to the pull-out direction of the plug connector and after that the plug connector is laid toward the latch arms to fit with the latch arms, the holding force of the plug connector in the pull-out direction can be increased, and the fitting verification is easy and even if the fitting work is done blindly, any defective fitting can be avoided reliably, and these merits can be obtained while efforts are made to make the connectors thinner.

[RESPONSE CONTINUES ON NEXT PAGE]